## REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 34-41 are presently pending in this application. Claims 34-41 are added by the present amendment and Claims 28-33 are cancelled. Support for added claims can be found in the specification, at least, on page 40 in the paragraph starting on line 9, thus no new matter has been added.

In the outstanding Office Action, Figures 5 and 7 were objected to as including informalities; the Figures were objected to under 37 C.F.R. 1.83(a) as neglecting to show every feature of the invention specified in Claims 30 and 33; the specification was objected to on pages 27, 32 and 36 as including informalities; Claims 28-33 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement; Claim 28 is rejected under 35 U.S.C. §112, first paragraph, as failing to meet the enabling requirement; and Claims 28-33 were rejected under 35 U.S.C. §102(b) as anticipated by Sasayama et al. (U.S. Pat. No. 5,506,712, herein "Sasayama").

In response to the objections to Figs. 5 and 7, Figs. 5 and 7 have been corrected to overcome the objection. Specifically, Fig. 5 has been corrected to include reference character 338 and remover characters 372, 377 and 378. Fig. 7 has been corrected to relocate reference character 554 so that it labels a path that is connected to optical splitter 552.

In response to the objection to the figures under 37 C.F.R. 1.83(a) as neglecting to show every feature of the invention specified in Claims 30 and 33, Claims 30 and 33 have been cancelled. Accordingly, Applicants respectfully submit that the objection under 37 C.F.R. 1.83(a) is moot.

In response to the objection to the specification on pages 27, 32 and 36 as including informalities, the specification has been amended to correct the informalities. Accordingly, Applicants respectfully request that the objections to the specification be withdrawn.

In response to the rejection under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement, independent Claims 28 and 31 have been cancelled. Accordingly, Applicants respectfully submit that the rejection of Claims 28-33 under 35 U.S.C. § 112, first paragraph is moot.

In response to the rejection of Claim 28 under 35 U.S.C. § 112, first paragraph as failing to meet the enabling requirement, Claim 28 has been cancelled. Accordingly, Applicants respectfully submit that the rejection of Claim 28 under 35 U.S.C. § 112, first paragraph is moot.

Addressing now the rejection of Claims 28-33 under 35 U.S.C. §102(b) as anticipated by Sasayama, that rejection is respectfully traversed.

In a non-limiting example, Fig. 11 of the present invention describes a converting fiber hub (791) which includes a controller (829) and several HCMs (815-816), the HCMs (815-816) including a receiver (820), a frequency converter (821) and a transmitter (822). The receiver (820) and transmitter (822) are configured as optical converters, converting optical signals to electrical, and electrical to optical. The controller (829) is configured to control the receiver (820), a frequency converter (821) and a transmitter (822).

Added Claim 34 recites, in part,

> a plurality of upstream input ports;
> a plurality of upstream output ports;
> a plurality of bidirectional downstream input/output ports;
> a plurality of hub conversion modules, wherein each hub conversion module is connected to one of said plurality of upstream input ports and to a corresponding one of said plurality of bidirectional downstream input/output ports, said hub conversion module comprising:
> a receiver configured to convert a carrier signal modulated on an optical input signal to an electrical signal,

> a frequency converter connected to an output of said receiver configured to convert the frequency of said electrical signal, and
>
> a transmitter connected to an output of said frequency converter and configured to convert the electrical signal to a carrier signal modulated on an optical output signal;
>
> a controller connected to each of said hub conversion modules and configured to control the frequency conversion of the electrical signal.

Claim 39 recites similar features.

Sasayama describes a time division highway switch that includes several tunable frequency converters. More specifically, Sasayama describes that the tunable frequency converters are configured to convert time division signals into high speed electrical signals which are used to drive a laser modulator. Further the high speed electrical signals are used to inform the tunable frequency laser so that the generated laser beam is of the prescribed timeslot frequency.

In other words, the tunable frequency converters of Sasayama, read the data modulated on a laser beam, change the frequency of the laser beam to fit in a specified frequency channel, and re-modulate the changed laser beam.[1] However, Sasayama does not describe converting the frequency of an electronic signal derived from a carrier signal modulated on an optical input signal as is described in Claim 34. Further, Sasayama does not describe a plurality of upstream input ports, upstream output ports, or bidirectional downstream input/output ports.

Thus, as shown above, Sasayama does not describe all of the features recited in added independent Claim 34 and similarly in Claim 39.

Therefore, it is respectfully submitted that independent Claim 34 and similarly Claim 39, and claims depending therefrom, patentably distinguish over Sasayama.

[1] Sasayama, Col. 6, lines 16-34.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 34-41 is earnestly solicited.

Respectfully submitted,

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IN THE DRAWINGS

The attached sheet of drawings includes changes to Figs. 5 and 7. These sheets, which include Figs. 5 and 7 respectively, replace the original sheets including Figs. 5 and 7.

Attachment: Replacement Sheets (2)